Remarks

I. 35 USC §102

The Office Action rejects claims 1-13, 17-22 and 24-27 under 35 USC §102(e) as allegedly being anticipated by U.S. Patent No. 6,243,667 to Kerr et al. ("Kerr").

A. Claim 1

Regarding claim 1, the Office Action states:

> Regarding **Claim 1** Kerr et al. discloses a method of identifying multiple packets in a communication flow between a source entity and a destination entity, comprising (see figure 2, message flow patterns):
>
> storing a first flow identifier of a first packet received from a source entity for a destination entity, wherein said first flow identifier comprises an identifier of the source entity and an identifier of the destination entity (see col. 3, lines 57-67, flow identifying, identifying a flow for the packet, see col. 6, lines 29-41, the flow cache, stores the flow identifiers, including the source and the destination);
>
> storing said first packet in a packet memory for transfer toward the destination entity; storing a second flow identifier of a second packet(see col. 6, lines 32-42, flow cache(memory), stores the flow identifiers, see col. 3, lines 56-67, the router stores the packet for transfer to the destination);
>
> storing said second packet in said packet memory; determining whether said first flow identifier matches said second flow identifier(see col. 3, lines 55-67, the router stores packets, and identifies the message flow using the flow identifier of the header);
>
> storing a first indicator in the destination entity if a first communication flow identified by said first flow identifier comprises said second packet;(see col. 4, lines 1-7, the routing device look up the flow cache to determine a flow, results are identified or new) and
>
> storing a second indicator in the destination entity if said first packet is the only packet stored in the packet memory that is part of said first communication flow(see col. 4, lines 1-7, the flow is identified as new if the first packet only packet part of the communication flow).

Applicants respectfully disagree. Claim 1 in part recites "storing a first indicator *in the destination entity* if a first communication flow identified by said first flow identifier comprises said second packet." Regarding this recitation, the Office Action cites "col. 4, lines 1-7" of Kerr, and explains "the routing device look up the flow cache to determine a flow, results are identified or new." Note, however, that according to earlier statements of the Office Action, the routing device is *not* the destination, but rather

"stores the flow identifiers, including the source and the destination." Thus, according to the Office Action, Kerr does not teach "storing a first indicator *in the destination entity*," in contrast to claim 1.

Similarly, claim 1 in part recites "storing a second indicator *in the destination entity* if said first packet is the only packet stored in the packet memory that is part of said first communication flow." Regarding this recitation, the Office Action again cites "col. 4, lines 1-7" of Kerr, and explains "the flow is identified as new if the first packet only packet part of the communication flow." Applicants again note that, according to earlier statements of the Office Action, the routing device is *not* the destination, but rather "stores the flow identifiers, including the source and the destination." Thus, according to the Office Action, Kerr does not teach "storing a second indicator *in the destination entity*," in contrast to claim 1.

For at least these reasons, claim 1 and the claims that depend from claim 1 are not anticipated by Kerr.

B. Claims 2 and 24

Regarding claims 2 and 24, the Office Action states:

> Regarding **Claims 2 and 24** Kerr et al. discloses everything as applied above (*see claims 1 and 3*).
>
> prior to said storing a first flow identifier, parsing said first packet to retrieve said identifier of the source entity and said identifier of the destination entity(see col. 3, lines 56-67, the routing device examines a header for the packet, to retrieve identifiers).

Applicants note that claim 3 is an independent claim that was not "*applied above*" in the Office Action and claim 24 depends from independent claim 3 rather than claim 1, which also was not "*applied above.*"

For reasons stated above with regard to claim 1, applicants assert that claim 2 is not anticipated by Kerr.

Claim 3 is not anticipated by Kerr, as explained below, and so claim 24 is also not anticipated by Kerr.

C. Claims 3 and 22

Regarding claims 3 and 22, the Office Action states:

> Regarding **Claims 3 and 22** Kerr et al. discloses a method of identifying one or more packets in a communication flow between a source entity and a destination entity, comprising:
>
> receiving a first packet at a communication device(see col. 3, lines 55-56, receives a packet);
>
> identifying a first communication flow comprising said first packet with a first flow identifier configured to identify both the source entity and the destination entity(see col. 3, lines 57-67, flow identifying, identifying a flow for the packet, see col. 6, lines 29-41, the flow cache, stores the flow identifiers, including the source and the destination);
>
> determining whether said first communication flow also comprises a second packet received at said communication device after said first packet was received at said communication device(see col. 3, lines 49-67, the router determines the message flow of the received packets); and
>
> transferring said first packet to a host computer for processing in accordance with a communication protocol associated with said first packet(see col. 2-3, lines 50-2, the router, processes in accordance to a transmission protocol type of the first packet).

Applicants respectfully disagree. Claims 3 and 24 in part recite "transferring said first packet *to a host computer* for processing in accordance with a communication protocol associated with said first packet." Regarding this recitation, the Office Action cites "col. 2-3, lines 50-2" of Kerr, and explains "the router, processes in accordance to a transmission protocol type of the first packet." Note, however, that according to earlier statements of the Office Action, the router is mapped to "a communication device" that performs "receiving a first packet...(see col. 3, lines 55-56, receives a packet)." Applicants assert that the cited portions of Kerr do not teach that "the router" receives the packet and transfers the packet to itself.

For at least this reason, claims 3 and 22 and the claims that depend from claims 3 and 22 respectively are not anticipated by Kerr.

D. Claim 4

Regarding claim 4, the Office Action states:

> Regarding **Claim 4** Kerr et al. discloses everything as applied above (*see claim 3*).

transferring said second packet to said host computer(see col. 3, lines 55-56, the router receive packet);

wherein said host computer is configured to collectively process a header portion of said first packet and a header portion of said second packet in accordance with said communication protocol(see col. 2-3, lines 50-2, the router, processes in accordance to a transmission protocol type of the first packet, see col. 3, lines 57-67, the header is examined).

Applicants respectfully disagree. Claim 4 in part recites "transferring said second packet to said *host computer*." Regarding this recitation, the Office Action cites "col. 3, lines 55-56" of Kerr, and explains "the router receive packet." Note, however, that according to earlier statements of the Office Action, the router is mapped to "a communication device" that performs "receiving a first packet...(see col. 3, lines 55-56, receives a packet)." Applicants assert that the cited portions of Kerr do not teach that "the router" receives the packet and transfers the packet to itself.

For at least this reason, claim 4 is not anticipated by Kerr.

E. Claims 5 and 18

Regarding claims 5 and 18, the Office Action states:

Regarding **Claims 5 and 18** Kerr et al. discloses everything as applied above (*see claims 3 and 16*).

wherein said identifying comprises:

receiving a flow key generated by concatenating an identifier of the source entity and an identifier of the destination entity(see col. 6, lines 32-41, the flow keys , with information about message flows to include the source and the destination flow identifiers);

wherein said first flow identifier comprises said flow key(see col. 6, lines 32-41, the flow cache includes the flow keys about the messages flows).

Applicants respectfully note that the Office Action admits in its obviousness analysis on page 11 that Kerr does not disclose all the limitations of claim 16, and for at least this reason claim 18 is not anticipated by Kerr.

Applicants further note that Kerr does not disclose all the limitations of claim 3, as explained above, and for at least this reason claim 5 is not anticipated by Kerr.

F. Claims 6 and 17

Regarding claims 6 and 17, the Office Action states:

> Regarding **Claims 6 and 17** Kerr et al. discloses everything as applied above (*see claims 3 and 16*).
> wherein said identifying comprises:
> receiving an index of said first communication flow in a flow database; wherein said first flow identifier comprises said index(seel col. 6, lines 3 1-49, the flow cache had a buckets of entries, of a database flow, which comprises a four-byte pointer(reads on index)).

Applicants respectfully note that the Office Action admits in its obviousness analysis on page 11 that Kerr does not disclose all the limitations of claim 16, and for at least this reason claim 17 is not anticipated by Kerr.

Applicants further note that Kerr does not disclose all the limitations of claim 3, as explained above, and for at least this reason claim 6 is not anticipated by Kerr.

G. Claim 7

Regarding claim 7, the Office Action states:

> Regarding **Claim 7** Kerr et al. discloses everything as applied above (*see claim 3*).
> wherein said determining comprises comparing said first flow identifier with a second flow identifier associated with a second packet received at said communication device (see col. 4, lines 1-7, the routing device performs lookup in a flow cache comparing the flow identifiers with second packet to determine message flows).

Applicants respectfully note that Kerr does not disclose all the limitations of claim 3, as explained above, and for at least this reason claim 7 is not anticipated by Kerr.

H. Claim 8

Regarding claim 8, the Office Action states:

> Regarding **Claim 8** Kerr et al. discloses everything as applied above (*see claim 7*).
> wherein said determining further comprises
> storing said first flow identifier in a flow memory(see col. 6, lines 29-50, the flow cqache stores the flow identifiers in a flow memory) ; and
> storing said second flow identifier in said flow memory(see col. 6, lines 29-50, the second flow identifier is stored); and

comparing said stored first flow identifier and said stored second flow identifier(see col. 4, lines 1-7, the message flow is identified by comparing flow identifiers).

Applicants respectfully note that Kerr does not disclose all the limitations of claim 7, as explained above, and for at least this reason claim 8 is not anticipated by Kerr.

I. Claim 9

Regarding claim 9, the Office Action states:

Regarding **Claim 9** Kerr et al. discloses everything as applied above (*see claim 8*).
wherein said flow memory is an associative memory in said communication device (see figure 3, section 300 flow caches).

Applicants respectfully note that Kerr does not disclose all the limitations of claim 8, as explained above, and for at least this reason claim 9 is not anticipated by Kerr.

J. Claim 10

Regarding claim 10, the Office Action states:

Regarding **Claim 10** Kerr et al. discloses everything as applied above (*see claim 3*).
storing said first packet in a packet memory (see col. 2, lines 40-45, the router stores the packet memory).

Applicants respectfully note that Kerr does not disclose all the limitations of claim 3, as explained above, and for at least this reason claim 10 is not anticipated by Kerr. In addition, applicants are unsure what is meant by "the router stores the packet memory," but note that it differs from the claim.

K. Claim 11

Regarding claim 11, the Office Action states:

Regarding **Claim 11** Kerr et al. discloses everything as applied above (*see claim 10*).
wherein said determining comprises comparing said first flow identifier configured to identify said first communication flow with a second flow identifier configured to identify a second communication flow comprising a packet stored in said packet memory (see col. 4, lines 1-

7, the message flow is identified by comparing flow identifiers, if new flow is determined or old message flow).

Applicants respectfully note that Kerr does not disclose all the limitations of claim 10, as explained above, and for at least this reason claim 11 is not anticipated by Kerr.

L. Claim 12

Regarding claim 12, the Office Action states:

> Regarding **Claim 12** Kerr et al. discloses everything as applied above (*see claim 3*).
> Informing said host computer of said transfer of said first packet (see col. 4, lines 61-63, the router devices transfer the packet)

Applicants respectfully note that Kerr does not disclose all the limitations of claim 3, as explained above, and for at least this reason claim 12 is not anticipated by Kerr. In addition, applicants are unsure what is meant by "the router devices transfer the packet," but note that it differs from the claim, and that it is clear that Kerr does not discloses that the router receives packets, transfers them to itself and informs itself of the transfer of the packet.

M. Claim 13

Regarding claim 13, the Office Action states:

> Regarding **Claim 13** Kerr et al. discloses everything as applied above (*see claim 12*).
> said informing comprises configuring an indicator in a host memory (see col. 4, lines 61-63, the router device routes the packets in response to routing information retrieved form step 225(see figure 2)).

Applicants respectfully note that Kerr does not disclose all the limitations of claim 12, as explained above, and for at least this reason claim 13 is not anticipated by Kerr.

N. Claim 19

Regarding claim 19, the Office Action states:

> Regarding **Claim 19** Kerr et al. discloses everything as applied above (*see claim 16*).

wherein said packet memory comprises said flow memory (see col. 3, lines 40-48, the routing device (packet memory, maintains the flow cache)).

Applicants respectfully note that the Office Action admits in its obviousness analysis on page 11 that Kerr does not disclose all the limitations of claim 16, and for at least this reason claim 19 is not anticipated by Kerr.

O. Claims 20 and 27

Regarding claims 20 and 27, the Office Action states:

Regarding **Claims 20 and 27** Kerr et al. discloses everything as applied above (*see claim 16 and 3*).

storing a first indicator in a host memory if said communication flow comprises said second packet; and storing a second indicator in said host memory if said first packet is the only packet in said packet memory that is part of said communication flow (see col. 4, lines 1-7, the message flow is identified by comparing flow identifiers, if new flow is determined or old message flow).

Applicants respectfully note that the Office Action admits in its obviousness analysis on page 11 that Kerr does not disclose all the limitations of claim 16, and for at least this reason claim 20 is not anticipated by Kerr.

Applicants further note that Kerr does not disclose all the limitations of claim 3, as explained above, and for at least this reason claim 27 is not anticipated by Kerr.

P. Claims 25 and 26

Regarding claims 25 and 26, the Office Action states:

Regarding **Claims 25 and 26** Kerr et al. discloses a communication interface, comprising:

a header parser configured to parse a header of a first packet received at the communication interface, wherein the first packet was issued from a source entity for a destination entity(see col. 3, lines 57-67, the router device examines the headers of the received packets);

a flow database configured to facilitate management of a communication flow comprising the first packet, the flow database comprising(seel col. 6, lines 31-49, the flow cache had a buckets of entries, of a database flow, which comprises a four-byte pointer(reads on index)) :

a flow key configured to identify the communication flow using identifiers of the source entity and the destination entity(see col. 6, lines 32-36, the flow cache, comprise a memory which associated flow keys which include the source and the destination);

an activity indicator configured to indicate a recency with which a packet in the communication flow has been received(see col. 5, lines 5 1-54, at step 241, the routing device examines, in the flow cache and compares the current time with the last time a packet was routed using a particular entry); and

a validity indicator for indicating whether the communication flow is valid(see col. 3, lines 39-49, the routing device maintains the flow cache and remove message flow that are no longer valid. Indicating message flow is no longer valid);

a code generator configured to generate an operation code for the first packet, to facilitate forwarding of the first packet toward the destination entity(see col. 6, lines 29-41, the flow

Applicants respectfully note that the Office Action points to the same element of Kerr, the "flow key," as reading on two different elements of claim 25: "a flow key" and "a code generator." Moreover, the Office Action points to essentially the same section of Kerr as disclosing the two different elements of claim 25: "col. 6, lines 31-49" and "col. 6, lines 29-41." For at least this reason the Office Action has not presented a *prima facie* case of anticipation of claim 25.

The Office Action does not even bother to point to any of the elements of claim 26, which are different than those of claim 25. For at least this reason the Office Action has not presented a *prima facie* case of anticipation of claim 26.

II. 35 USC §103

The Office Action rejects claims 14-16 and 23 under 35 USC §103(a) as allegedly being unpatentable over Kerr in view of by U.S. Patent No. 5,819,111 to Davies et al. ("Davies").

A. Claim 14

Regarding claim 14, the Office Action states:

Regarding **Claim 14** Kerr et al. discloses everything as applied above (*see claim 13*).

Kerr et al. fails to specifically point out wherein said indicator is configured to indicate that said host computer should delay processing

said first packet until said second packet is transferred to said host computer as claimed.

Davies et al. teaches wherein said indicator is configured to indicate that said host computer should delay processing said first packet until said second packet is transferred to said host computer (See col 4, lines 8-13, The disabling step can include checking if a run length encoded data transfer is pending from the host, and if so, delaying disabling of the data transfers from the host to the peripheral until a data byte associated with the run length encoded data is received by the interface controller)

Therefore it would have been obvious to one with ordinary skill in the art at the time the invention was made to combine Kerr et al. invention with Davies et al. invention because Davies et al. invention provides provide methods and apparatus for reducing the complexity of programming on the peripheral side of an IEEE interface (see Davies et al. col. 3, lines 10-16)

Applicants respectfully disagree. Initially, applicants point out above that claim 13 is not anticipated by Kerr, so the premise for the obviousness rejection over the primary reference of Kerr is inapplicable. Moreover, "said host computer" is, according to earlier portions of the Office Action, "the router," and so "to indicate that said host computer should delay processing said first packet until said second packet is transferred to said host computer" as recited in claim 14 is even more nonsensical. Davies does not somehow solve that nonsense, even if, *assuming arguendo* it were to have been combined with Kerr as proposed by the Office Action.

For at least these reasons, claim 14 is nonobvious over Kerr in view of Davies.

B. Claim 15

Regarding claim 15, the Office Action states:

Regarding **Claim 15** Kerr et al. discloses everything as applied above (*see claim 13*).

Kerr et al. fails to specifically point out wherein said indicator indicates that said host computer should not delay processing said first packet as claimed.

Davies et al. teaches out wherein said indicator indicates that said host computer should not delay processing said first packet (See col 4, lines 8-13, The disabling step can include checking if a run length encoded data transfer is pending from the host, and if so, delaying disabling of the data transfers from the host to the peripheral until a data byte associated with the run length encoded data is received by the interface controller, otherwise do not delay)

Therefore it would have been obvious to one with ordinary skill in the art at the time the invention was made to combine Kerr et al. invention with Davies et al. invention because Davies et al. invention provides provide methods and apparatus for reducing the complexity of programming on the peripheral side of an IEEE interface (see Davies et al. col. 3, lines 10-16).

Applicants respectfully disagree. Initially, applicants point out above that claim 13 is not anticipated by Kerr, so the premise for the obviousness rejection over the primary reference of Kerr is inapplicable. Moreover, "said host computer" is, according to earlier portions of the Office Action, "the router," and so "wherein said indicator indicates that said host computer should not delay processing said first packet" as recited in claim 15 is even more curious. Davies does not somehow solve this issue, even if, *assuming arguendo* it were to have been combined with Kerr as proposed by the Office Action.

For at least these reasons, claim 15 is nonobvious over Kerr in view of Davies.

C. Claim 16

Regarding claim 16, the Office Action states:

Regarding **Claim 16** Kerr et al. discloses a method of transferring a packet from a network interface to a host computer, comprising:

receiving a first packet at a network interface(see col. 3, lines 55-56, receives a packet);

storing said first packet in a packet memory see col. 3, lines 55-67, the router stores packets,)

receiving a first flow identifier configured to identify a communication flow comprising said first packet(see col. 3, lines 57-67, flow identifying, identifying a flow for the packet, see col. 6, lines 29-41, the flow cache, stores the flow identifiers, including the source and the destination);

storing said first flow identifier in a flow memory(see col. 6, lines 29-41, the flow cache, stores the flow identifiers, including the source and the destination);

searching said flow memory for a second packet in said communication flow received at the network interface after said first packet(see col. 3, lines 49-67, the router determines the message flow of the received packets);

transferring said first packet to said host computer(see col. 2-3, lines 50-2, the router, processes in accordance to a transmission protocol type of the first packet); and

Kerr et al. fails to specifically point out configuring an indicator in a host memory to indicate whether processing of said first packet by said host computer should be delayed to await transfer of said second packet to said host memory as claimed.

Davies et al. teaches configuring an indicator in a host memory to indicate whether processing of said first packet by said host computer should be delayed to await transfer of said second packet to said host memory (See col 4, lines 8-13, The disabling step can include checking if a run length encoded data transfer is pending from the host, and if so, delaying disabling of the data transfers from the host to the peripheral until a data byte associated with the run length encoded data is received by the interface controller, otherwise do not delay).

Therefore it would have been obvious to one with ordinary skill in the art at the time the invention was made to combine Kerr et al. invention with Davies et al. invention because Davies et al. invention provides provide methods and apparatus for reducing the complexity of programming on the peripheral side of an IEEE interface (see Davies et al. col. 3, lines 10-16)

Applicants respectfully disagree. In addition to that which the Office Action admits Kerr does not disclose, applicants note that "the router" is pointed to by the Office Action as both the "network interface(see col. 3, lines 55-56, receives a packet)" and the "host computer(see col. 2-3, lines 50-2, the router processes in accordance to a transmission protocol type of the first packet)." Davies does not somehow solve this issue, even if, *assuming arguendo* it were to have been combined with Kerr as proposed by the Office Action.

For at least these reasons, claim 16 is nonobvious over Kerr in view of Davies.

D. Claim 23

Regarding claim 23, the Office Action states:

Regarding **Claim 23** Kerr et al. discloses a processor readable storage medium containing a data structure configured to store information concerning a packet to be transferred from a network interface to a host computer, the data structure including one or more entries, each entry comprising:

a flow number configured to identify a communication flow comprising a first packet received at the network interface from a source

entity for a destination entity associated with the host computer(see col. 6, lines 29-41, the flow cache has flow keys that reads on flow number); and

a validity indicator configured to provide(see col. 3, lines 39-49, the routing device maintains the flow cache and remove message flow that are no longer valid. Indicating message flow is no longer valid);

wherein said data structure is searched for a second entry containing said flow number when said first packet is transferred to the host computer to determine if said communication flow also comprises a second packet received at the network interface after said first packet (see col. 3-4, lines 57-7, the routing device identifies a message flow, the packets are compared to determine if is part of a message flow).

Kerr et al. fails to specifically point out a first indication if said first packet is ready for transfer to the host computer; and a second indication if said first packet is a control packet as claimed;

Davies et al teaches a first indication if said first packet is ready for transfer to the host computer (See col 4, lines 8-13, The disabling step can include checking if a run length encoded data transfer is pending from the host, and if so, delaying disabling of the data transfers from the host to the peripheral until a data byte associated with the run length encoded data is received by the interface controller, otherwise do not delay

a second indication if said first packet is a control packet(see col. 3, lines 28-41, method can include after execution of the step of transferring a data block, either setting the interface controller to disable acknowledgment of receipt of data if a flow control status flag indicates pending flow stop, receiving of control packets)

Therefore it would have been obvious to one with ordinary skill in the art at the time the invention was made to combine Kerr et al. invention with Davies et al. invention because Davies et al. invention provides provide methods and apparatus for reducing the complexity of programming on the peripheral side of an IEEE interface (see Davies et al. col. 3, lines 10-16).

Applicants respectfully disagree. Kerr is directed to a router and Davies is directed to a peripheral device for a computer. One of ordinary skill in the art would not have considered "disabling data transfers," as taught by Davies, in a router such as Kerr. Moreover, a router such as Kerr does not acknowledge receipt of data, and so disabling "acknowledgment of receipt of data" in the router of Kerr would not have been considered by one of ordinary skill in the art, even in view of Davies.

For at least these reasons, claim 23 is nonobvious over Kerr in view of Davies.

V. Conclusion

For the reasons mentioned above, applicants respectfully assert that the pending claims are in condition for allowance, and a Notice of Allowability is solicited.

Respectfully submitted,

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